

## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: ANDY KASHNIKOW Examiner #: 60484 Date: 11/15/02  
Art Unit: 3700 Phone Number 308-1137 Serial Number: 10016611  
Mail Box and Bldg/Room Location: CP 2-2A01 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

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Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: \_\_\_\_\_

Inventors (please provide full names): \_\_\_\_\_

Earliest Priority Filing Date: \_\_\_\_\_

*\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

LIT SEARCH - U.S. PATENT NO.  
6,001,130.

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## STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>Solomon</u>	NA Sequence (#) _____	STN _____
Searcher Phone #: <u>305-5932</u>	AA Sequence (#) _____	Dialog _____
Searcher Location: <u>CP2, 2C08</u>	Structure (#) _____	<u>Questel/Orbit</u>
Date Searcher Picked Up: <u>11-15-02</u>	Bibliographic _____	Dr. Link _____
Date Completed: <u>11-15-02</u>	Litigation <u>✓</u>	<u>Lexis/Nexis</u>
Searcher Prep & Review Time: <u>6</u>	Fulltext _____	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: <u>4</u>	Other _____	Other (specify) _____

UNITED STATES PATENT AND TRADEMARK OFFICE GRANTED PATENT

6001130

December 14, 1999

Human spinal disc prosthesis with hinges

APPL-NO: 08944378 (08)

FILED-DATE: October 6, 1997

GRANTED-DATE: December 14, 1999

ENGLISH-ABST:

The invention relates to a spinal disc endoprosthesis. The endoprosthesis has a resilient body formed of one or more materials which may vary in stiffness from a relatively stiff exterior annular gasket portion to a relatively supple central nucleus portion. Concave-convex elements at least partly surround that nucleus portion so as to retain the nucleus portion and gasket between adjacent vertebral bodies in a patient's spine. Assemblies of endoprosthetic discs, endoprosthetic vertebral bodies, and endoprosthetic longitudinal ligaments may be constructed. To implant this endoprosthesis assembly, information is obtained regarding the size, shape, and nature of a patient's damaged spine. Thereafter, one or more prosthetic vertebral bodies and disc units are constructed in conformity with that information. Finally, the completed and conformed vertebral body and disc assembly is implanted in the patient's spine.

(C) QUESTEL 1994  
QUESTEL.ORBIT (TM) 1998

Selected file: PLUSPAT

**\*\* SS 1: Results 1**

1 / 1 PLUSPAT - @QUESTEL-ORBIT

PN - US6001130 A 19991214 [US6001130]  
TI - (A) Human spinal disc prosthesis with hinges  
IN - (A) BRYAN VINCENT (US); KUNZLER ALEX (US)  
AP - US94437897 19971006 [1997US-0944378]  
PR - US94437897 19971006 [1997US-0944378]  
CA2202453 19970411 [1997CA-2202453]  
US68123096 19960722 [1996US-0681230]  
US33949094 19941114 [1994US-0339490]  
IC - (A) A61F-002/44  
EC - A61F-002/30B8  
A61F-002/44  
A61F-002/44D  
ICO - K61B-017/00A  
K61B-017/68P  
K61B-017/86  
K61F-002/00A2E  
K61F-002/00A2F  
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K61F-002/08B  
K61F-002/30D  
K61F-002/30E  
K61F-002/30K  
K61F-002/30L2  
K61F-002/30L2A  
K61F-002/30L2A9P  
PCL - ORIGINAL (O) : 623017160; CROSS-REFERENCE (X) : 606061000  
DT - Corresponding document  
CT - US2677369; US4309777; US4599086; US4759766; US4759769; US4911718;  
US4917704; US4932969; US4955908; US4997432; US5002576; US5071437;  
US5122130; US5171281; US5192326; US5234431; US5258031; US5261911;  
US5306307; US5306308; US5314477; US5370697; US5401269; US5458642;  
US5534029; US5556431; US5674294; US5674296; EP0176728; EP000560140  
A1; DE2263842; DE3023353; SU1560184 A1; SU895433  
"The Occurrence of Optic Neuritis in Lesions of the Spinal Cord,  
Injury, Tumor, Melitis;" Taylor, Collier; Brain: A Journal of  
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"Development of a Prosthetic Intervertebral Disc;" Lee et al.; Spine; vol. 16; No. 6; 1991; pp. S253-S255.

"Lumbar Intervertebral Disc Prosthesis;" Tie-sheng et al.; Chinese Medical Journal, 104-(5); 1991; pp. 381-386.

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"Wear Studies for Development of an Intervertebral Disc Prosthesis;" Hellier et al.; Spine; vol. 17; No. 6 Supplement; 1992; pp. S86-S96.

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"Shear Stability of an Elastomeric Disk Spacer Within an

Intervertebral Joint: A Parametric Study;" Hawkins et al.; Journal of Biomechanical Engineering Technical Briefs; vol. 114; Aug. 1992; pp. 414-415.

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STG - (A) United States patent

AB - The invention relates to a spinal disc endoprosthesis. The endoprosthesis has a resilient body formed of one or more materials which may vary in stiffness from a relatively stiff exterior annular gasket portion to a relatively supple central nucleus portion. Concave-convex elements at least partly surround that nucleus portion so as to retain the nucleus portion and gasket between adjacent vertebral bodies in a patient's spine. Assemblies of endoprosthetic discs, endoprosthetic vertebral bodies, and endoprosthetic longitudinal ligaments may be constructed. To implant this endoprosthesis assembly, information is obtained regarding the size, shape, and nature of a patient's damaged spine. Thereafter, one or more prosthetic vertebral bodies and disc units are constructed in conformity with that information. Finally, the completed and conformed vertebral body and disc assembly is implanted in the patient's spine.

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PN - US 6001130 [US6001130]  
AP - US 944378/97 19971006 [1997US-0944378]  
DT - US-P  
ACT - 19971006 US/AE-A  
APPLICATION DATA (PATENT)  
US 944378/97 19971006 [1997US-0944378]

19991214 US/A  
PATENT  
UP - 2000-13

1 / 1 CRXX - @CLAIMS/RRX  
PN - 6,001,130 A 19991214 [US6001130]  
PA - Bryan, Vincent; Kunzler, Alex  
ACT - 20011214 REISSUE REQUESTED  
ISSUE DATE OF O.G.: 20021105  
REISSUE REQUEST NUMBER: 10/017611  
EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 3738

Reissue Patent Number:

1 / 1 PAST - @Thomson Derwent  
AN - 200245-001818  
PN - 6001130 A [US6001130]  
OG - 2002-11-05  
ACT - REISSUE APPLICATION FILED

Selected file: INPADO

\*\* SS 1: Results 8

1 / 8 INPADO - @INPADO

PN - CA 2202453 AA 19981011 [CA2202453]  
TI - HUMAN SPINAL DISC PROSTHESIS  
LA - ENG  
IN - BRYAN VINCENT [US]; KUNZLER ALEX [US]  
PA - BRYAN VINCENT [US]; KUNZLER ALEX [US]  
AP - CA 2202453/97-A 19970411 [1997CA-2202453]  
PR - CA 2202453/97-A 19970411 [1997CA-2202453]  
US 681230/96-A 19960722 [1996US-0681230]  
US 339490/94-A 19941114 [1994US-0339490]  
IC - A61F-002/44

2 / 8 INPADO - @INPADO

PN - EP 1166725 A2 20020102 [EP1166725]  
TI - HUMAN SPINAL DISC PROSTHESIS  
LA - ENG  
IN - BRYAN VINCENT [US]; KUNZLER ALEX [US]  
PA - SPINAL DYNAMICS CORP [US]  
AP - EP 1123288/01-A 19970606 [2001EP-1123288]  
PR - EP 97303934/97-A3 19970606 [1997EP-0303934]  
US 681230/96-A 19960722 [1996US-0681230]  
IC - A61F-002/44  
DS - AT\* BE\* CH\* DE\* DK\* ES\* FI\* FR\* GB\* GR\* IE\* IT\* LI\* LU\* MC\* NL\* PT\*  
SE\*

1 / 2 LEGALI - @LEGSTAT

PN - EP 1166725 [EP1166725]  
AP - EP 01123288/01 19970606 [2001EP-0123288]  
DT - EP-P  
ACTE - 19970606 EP/AE-A  
EP-APPLICATION  
EP 01123288/01 19970606 [2001EP-0123288]

20020102 EP/AC-P  
DIVISIONAL APPLICATION (ART. 76) OF:  
(EP 820740 20020102 [EP-820740])

20020102 EP/AK-A2 [+]  
DESIGNATED CONTRACTING STATES IN AN APPLICATION WITHOUT SEARCH  
REPORT:  
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

20020102 EP/A2 [+]  
PUBLICATION OF APPLICATION WITHOUT SEARCH REPORT

20020502 EP/RIN1  
INVENTOR (CORRECTION)  
BRYAN, VINCENT \* KUNZLER, ALEX

20020703 EP/AK-A3 [+]  
DESIGNATED CONTRACTING STATES IN A SEARCH REPORT:  
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

20020703 EP/A3 [+]  
SEPARATE PUBLICATION OF THE SEARCH REPORT (ART. 93)  
UP - 2002-27

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PN - EP 820740 [EP-820740]  
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19980128 EP/AK-A1 [+]  
DESIGNATED CONTRACTING STATES IN AN APPLICATION WITH SEARCH  
REPORT:  
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

19980128 EP/A1 [+]  
PUBLICATION OF APPLICATION WITH SEARCH REPORT

19980923 EP/17P [+]  
REQUEST FOR EXAMINATION FILED  
980727

19981007 EP/RBV [+]  
DESIGNATED CONTRACTING STATES (CORRECTION):  
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

19990203 EP/RAP1  
APPLICANT REASSIGNMENT (CORRECTION)  
SPINAL DYNAMICS CORPORATION

19990203 EP/RIN1  
INVENTOR (CORRECTION)  
BRYAN, VINCENT \* KUNZLER, ALEX

20001011 EP/17Q [+]  
FIRST EXAMINATION REPORT  
20000823

20020102 EP/AH-P  
DIVISIONAL APPLICATION (ART. 76) IN:  
(EP 1166725 20020102 [EP1166725])

UP - 2002-01

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TI - HUMAN SPINAL DISC PROSTHESIS  
LA - ENG  
IN - BRYAN VINCENT [US]; KUNZLER ALEX [US]  
PA - SPINAL DYNAMICS CORP [US]  
AP - EP 1123288/01-A 19970606 [2001EP-1123288]  
PR - EP 97303934/97-A3 19970606 [1997EP-0303934]  
US 681230/96-A 19960722 [1996US-0681230]  
IC - A61F-002/44  
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PN - EP 1166725 [EP1166725]  
AP - EP 01123288/01 19970606 [2001EP-0123288]  
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ACTE - 19970606 EP/AE-A  
EP-APPLICATION

EP 01123288/01 19970606 [2001EP-0123288]

20020102 EP/AC-P  
DIVISIONAL APPLICATION (ART. 76) OF:  
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20020102 EP/AK-A2 [+]  
DESIGNATED CONTRACTING STATES IN AN APPLICATION WITHOUT SEARCH  
REPORT:  
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

20020102 EP/A2 [+]  
PUBLICATION OF APPLICATION WITHOUT SEARCH REPORT

20020502 EP/RIN1  
INVENTOR (CORRECTION)  
BRYAN, VINCENT \* KUNZLER, ALEX

20020703 EP/AK-A3 [+]  
DESIGNATED CONTRACTING STATES IN A SEARCH REPORT:  
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

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SEPARATE PUBLICATION OF THE SEARCH REPORT (ART. 93)  
2002-27

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EP 97303934/97 19970606 [1997EP-0303934]

19980128 EP/AK-A1 [+]  
DESIGNATED CONTRACTING STATES IN AN APPLICATION WITH SEARCH  
REPORT:  
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

19980128 EP/A1 [+]  
PUBLICATION OF APPLICATION WITH SEARCH REPORT

19980923 EP/17P [+]  
REQUEST FOR EXAMINATION FILED  
980727

19981007 EP/RBV [+]  
DESIGNATED CONTRACTING STATES (CORRECTION):  
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

19990203 EP/RAP1  
APPLICANT REASSIGNMENT (CORRECTION)  
SPINAL DYNAMICS CORPORATION

19990203 EP/RIN1  
INVENTOR (CORRECTION)  
BRYAN, VINCENT \* KUNZLER, ALEX

20001011 EP/17Q [+]  
FIRST EXAMINATION REPORT  
20000823



20020102 EP/AH-P  
DIVISIONAL APPLICATION (ART. 76) IN:  
(EP 1166725 20020102 [EP1166725])  
UP - 2002-01

4 / 8 INPADO - @INPADO  
PN - EP 820740 A1 19980128 [EP-820740]  
TI - HUMAN SPINAL DISC PROSTHESIS  
LA - ENG  
IN - BRYAN VINCENT [US]; KUNZLER ALEX [US]  
PA - BRYAN VINCENT [US]; KUNZLER ALEX [US]  
AP - EP 97303934/97-A 19970606 [1997EP-0303934]  
PR - CA 2202453/97-A 19970411 [1997CA-2202453]  
US 681230/96-A 19960722 [1996US-0681230]  
IC - A61F-002/44  
DS - AT\* BE\* CH\* DE\* DK\* ES\* FI\* FR\* GB\* GR\* IE\* IT\* LI\* LU\* MC\* NL\* PT\*  
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1 / 2 LEGALI - @LEGSTAT  
PN - EP 1166725 [EP1166725]  
AP - EP 01123288/01 19970606 [2001EP-0123288]  
DT - EP-P  
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EP 01123288/01 19970606 [2001EP-0123288]

20020102 EP/AC-P  
DIVISIONAL APPLICATION (ART. 76) OF:  
(EP 820740 20020102 [EP-820740])

20020102 EP/AK-A2 [+]  
DESIGNATED CONTRACTING STATES IN AN APPLICATION WITHOUT SEARCH  
REPORT:  
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

20020102 EP/A2 [+]  
PUBLICATION OF APPLICATION WITHOUT SEARCH REPORT

20020502 EP/RIN1  
INVENTOR (CORRECTION)  
BRYAN, VINCENT \* KUNZLER, ALEX

20020703 EP/AK-A3 [+]  
DESIGNATED CONTRACTING STATES IN A SEARCH REPORT:  
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

20020703 EP/A3 [+]  
SEPARATE PUBLICATION OF THE SEARCH REPORT (ART. 93)  
UP - 2002-27

2 / 2 LEGALI - @LEGSTAT  
PN - EP 820740 [EP-820740]  
AP - EP 97303934/97 19970606 [1997EP-0303934]  
DT - EP-P  
ACTE - 19970606 EP/AE-A  
EP-APPLICATION  
EP 97303934/97 19970606 [1997EP-0303934]

19980128 EP/AK-A1 [+]  
DESIGNATED CONTRACTING STATES IN AN APPLICATION WITH SEARCH

REPORT:

AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

19980128 EP/A1 [+]

PUBLICATION OF APPLICATION WITH SEARCH REPORT

19980923 EP/17P [+]

REQUEST FOR EXAMINATION FILED

980727

19981007 EP/RBV [+]

DESIGNATED CONTRACTING STATES (CORRECTION):

AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

19990203 EP/RAP1

APPLICANT REASSIGNMENT (CORRECTION)

SPINAL DYNAMICS CORPORATION

19990203 EP/RIN1

INVENTOR (CORRECTION)

BRYAN, VINCENT \* KUNZLER, ALEX

20001011 EP/17Q [+]

FIRST EXAMINATION REPORT

20000823

20020102 EP/AH-P

DIVISIONAL APPLICATION (ART. 76) IN:

(EP 1166725 20020102 [EP1166725])

UP - 2002-01

5 / 8 INPADOC - ©INPADOC

PN - US 6156067 A 20001205 [US6156067]

TI - HUMAN SPINAL DISC PROSTHESIS

IN - BRYAN VINCENT [US]; KUNZLER ALEX [US]

PA - SPINAL DYNAMICS CORP [US]

AP - US 856846/97-A 19970515 [1997US-0856846]

PR - US 856846/97-A 19970515 [1997US-0856846]

US 681230/96-A2 19960722 [1996US-0681230]

US 339490/94-B2 19941114 [1994US-0339490]

IC - A61F-002/44; A61B-017/56; A61B-017/58

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PN - US 6156067 [US6156067]

AP - US 856846/97 19970515 [1997US-0856846]

DT - US-P

ACTE - 19970515 US/AE-A

APPLICATION DATA (PATENT)

US 856846/97 19970515 [1997US-0856846]

20001205 US/A

PATENT

UP - 2001-01

6 / 8 INPADOC - ©INPADOC

PN - US 5674296 A 19971007 [US5674296]

TI - HUMAN SPINAL DISC PROSTHESIS

IN - BRYAN VINCENT [US]; KUNZLER ALEX [US]

PA - SPINAL DYNAMICS CORP [US]

AP - US 681230/96-A 19960722 [1996US-0681230]

PR - US 681230/96-A 19960722 [1996US-0681230]  
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US 681230/96 19960722 [1996US-0681230]

19970428 US/AS02  
ASSIGNMENT OF ASSIGNOR'S INTEREST  
SPINAL TECHNOLOGIES CORPORATION 4624 E. MERCER WAY MERCER ISLAND,  
WASHINGTON 980 \* BRYAN, VINCENT E. JR. : 19970309; KUNZLER, ALEX  
: 19970309

19970502 US/AS03  
MERGER  
SPINAL DYNAMICS CORPORATION SUITE 203 15400 S.E. 30TH PLACE  
BELLEVUE, WASHINGTON \* SPINAL TECHNOLOGIES CORPORATION : 19970310

19971007 US/A  
PATENT

UP - 2000-52

7 / 8 INPADOC - @INPADOC

PN - US 5865846 A 19990202 [US5865846]  
TI - HUMAN SPINAL DISC PROSTHESIS  
IN - BRYAN VINCENT [US]; KUNZLER ALEX [US]  
PA - BRYAN VINCENT [US]; KUNZLER ALEX [US]  
AP - US 856513/97-A 19970515 [1997US-0856513]  
PR - US 856513/97-A 19970515 [1997US-0856513]  
CA 2202453/97-A 19970411 [1997CA-2202453]  
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APPLICATION DATA (PATENT)  
US 856513/97 19970515 [1997US-0856513]

19990202 US/A  
PATENT

20010410 US/RF  
REISSUE APPLICATION FILED  
20010202

UP - 2001-19

8 / 8 INPADOC - @INPADOC

PN - US 6001130 A 19991214 [US6001130]  
TI - HUMAN SPINAL DISC PROSTHESIS WITH HINGES

IN - BRYAN VINCENT [US]; KUNZLER ALEX [US]  
PA - BRYAN VINCENT [US]; KUNZLER ALEX [US]  
AP - US 944378/97-A 19971006 [1997US-0944378]  
PR - US 944378/97-A 19971006 [1997US-0944378]  
CA 2202453/97-A 19970411 [1997CA-2202453]  
US 681230/96-A2 19960722 [1996US-0681230]  
US 339490/94-B2 19941114 [1994US-0339490]  
IC - A61F-002/44

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PN - US 6001130 [US6001130]  
AP - US 944378/97 19971006 [1997US-0944378]  
DT - US-P  
ACTE - 19971006 US/AE-A  
APPLICATION DATA (PATENT)  
US 944378/97 19971006 [1997US-0944378]  
  
19991214 US/A  
PATENT  
UP - 2000-13

Session finished: 15 NOV 2002 Time 20:56:56